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ABSTRACT

This paper provides data on the cost of educating undergraduate elementary education students enrolled in the University of Georgia College of Education in 1967-68. Introductory sections describe review of the literature and procedures for determining unit cost through cost allocation based on the earned quarter hour of credit. Data, presented in tables and discussed briefly, includes: 1) quarter hours of earned credit for the Colleges of Education and Arts and Sciences; 2) total expenditures and cost per earned quarter hour for ten cost categories, e.g., administration, physical plant, libraries, instruction, research; 3) suggested elementary education undergraduate program including quarter hours in each college; 4) costs per student (freshman, sophomore, junior, senior) in each category in the suggested program; 5) total expenditure per student by cost category, college, and class; 6) total instructional costs and costs per earned credit hour in each year (1960-68); and 7) summary of total costs of general instruction and instruction excluding research in 1967-68. (The summary section concludes that the cost of instruction plus costs for such services as libraries, administration, and physical plant per earned quarter hour of credit was \$47.28 in the College of Education and \$29.85 in the College of Arts and Sciences with the total cost of instruction excluding research about \$1,792,000.) (JS)

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GEORGIA EDUCATIONAL MODELS
The University of Georgia
College of Education
Athens, Georgia 30601

SELECTED COST DATA ON ELEMENTARY
EDUCATION STUDENTS AT
THE UNIVERSITY OF GEORGIA

GEM Bulletin 69-3

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The purpose of this report is to provide data relative to the cost for educating undergraduate elementary education students enrolled in the College of Education at the University of Georgia. The study is confined to the costs associated with the fiscal year 1967-68 since it was the most recent year for which complete financial data are available. It is judged that the 1967-68 costs will provide the most valid base of any other available figures upon which to reflect the general status of the University for several years to come.

The cost data reported in this study will be compared with the projected cost to prepare an undergraduate elementary education student at the University of Georgia under the Georgia Educational Model. Thus, it will provide one of the bases upon which economic feasibility may be determined.

Review of the Literature

Literature concerned with the economics of education and college business management were revised in order to determine what information was available with regard to the cost of educating elementary education students in the colleges of the United States.

The review of the literature uncovered two publications (Ford, 1969 and Program Cost Differentials, 1968) that were highly related to the study at hand and other partial studies (Simon & Grant, 1968, pp. 63-104; Schietinger, 1968; Zanfino, 1968; Russell, 1954, pp. 33-165 and Bolin, 1965) which were applicable.

Ford (1969) in a study of the relationship between the total educational cost per earned credit hour and certain mental characteristics of college students at the Georgia Institute of Technology developed a methodology to determine the total educational cost of the individual student per earned credit hour. In this study Ford was concerned with the individual student and his effect on educational cost.

Program Cost Differentials at the University of South Florida (1968) reports the sixth in a series of analyses of expenditures and other cost factors at the University of South Florida. Included in this report is an analysis of fiscal factors related to the operation of the University for the 1965-66 fiscal year and a history of selected factors of institutional operations. The unit hour of credit is the basis of much of the cost allocation employed in this study.

A survey, by letter, was made of 150 institutions of higher learning in the United States in order to determine what cost data and accounting procedures related to the problem at hand were available. About one-third of the institutions responded to the survey.letter. The majority of the schools reported that they did not have unit cost of education on individual students nor did they have cost accounting procedures developed for determining such costs.

Procedures

The methodology for determining the total educational cost per earned credit hour is based, in part, on the work of Ford (1969). This seemed appropriate since the University of Georgia and the Georgia Institute of Technology are controlled by a common governing body, the Board of Regents of the State of Georgia and the accounting and budgetry systems are based on the same general plan. The unit cost methodology used in this study is effectively an extension of the present accounting ststem which transforms the existing data into the form required for determining the educational cost for an earned credit hour and in turn the cost of operation for the year.

The primary sources of data for this study were:

The University of Georgia Financial Report for the Year Ended June 30, 1968 (1968), Report on Examination to Determine Contractor's Experienced Overhead Rate for Research Year Ended June 30, 1968 (1968), and quarterly reports of credit hours earned by students at the University of Georgia (Whitehead, 1969).

The basic device used in developing the unit cost methodology was cost allocation. Cost allocation is defined as "the apportioning of the cost of an activity among those who benefit from it" (Ford, 1969, p. 21). Cost allocation is necessary since more than one user benefits from a given activity. Cost allocation, in this study, is based on the earned quarter hour of credit. One quarter hour of credit is defined as one hour of classroom work plus two hours of preparation times 50, the number of days in a regular academic quarter.

Whitehead (1969) compiled a summary of the number of quarter hours of credit earned by students at the University of Georgia for each school or college during the 1967-68 fiscal year. Table 1 presents a summary of these data for each quarter, the total for the year, and the percentage of total hours earned in each of the

colleges under consideration. It was found that 57.84% of of all hours of earned credit were completed in the College of Arts and Sciences, 14.46% in the College of Education and 27.70% in all other colleges. The remainder of this study will be confined to data associated with the College of Arts and Sciences and the College of Education since elementary education students take a negligible amount of work outside these colleges.

All graduate students at the University of Georgia are enrolled in the Graduate School. For purposes of this study their earned hours of credit are included in the total number of hours reported for the respective schools in which the student took formal course work. For example, during the Fall Quarter, 1967 a total of 141,076 hours were earned in the College of Arts and Sciences. Of this total 11,725 hours (8.31%) were earned by graduate level students.

The Report on Examination to Determine Contractor's Experienced Overhead Rate for Research Year Ended June 30, 1968 (1968) itemizes expenditures into eight broad categories. These eight categories include: (a) Administrative and General Expense (general administration, staff

TABLE 1
QUARTER HOURS OF EARNED CREDIT FOR THE UNIVERSITY OF GEORGIA,
COLLEGE OF EDUCATION AND COLLEGE OF ARTS AND SCIENCES FOR 1967-68¹

Quarter	Total for University	Arts and Sciences	College of Education	Other Colleges of University ²
Summer 1967	95,080	49,800	24,230	21,050
Fall 1967	234,576	141,076	28,532	64,968
Winter 1968	235,191	137,833	30,156	67,202
Spring 1968	228,043	129,906	31,744	66,393
Total	792,892	458,615	114,662	219,613
Percentage of Total	100%	57.84%	14.46%	27.70%

¹Source for this data: Mr. Comer Whitehead, Assistant To The Vice President
for Business and Finance, University of Georgia,
Athens, Georgia.

²Includes: Journalism, College of Agriculture, Home Economics, School of Social
Work, Law School, Home Economics, Forestry, Business, Veterinary
Medicine, Pharmacy.

benefits, general institutional expenses and student affairs), (b) Physical Plant (including building depreciation of 50 years), (c) Libraries, (d) Cost of Instruction - General (including salaries, wages and expenses), (e) Cost of Instruction - Restricted (including salaries, wages and expenses for restricted instruction such as special institutes, etc.), (f) Research Administration, (g) Computer Center, and (h) Research. Cost allocation for each area consisted of assigning a percentage of each of these operations to the College of Arts and Sciences and College of Education based on the percentage of the total earned hours for that college. In turn the cost per earned quarter hour of credit was computed by dividing this later figure by the total number of hours earned in the respective college. For example, the total expenditure of the University of Georgia for Administrative and General Expense was \$4,449,855 (Report on Examination, 1968). A total of 458,615 hours of credit were earned in the College of Arts and Sciences, which represents 57.84% of the total earned at the University of Georgia in the period 1967-68. Computation of the cost per earned quarter of credit is as follows:

$\$4,449,855 \times 57.84\% = \$2,515,957$ (Total allocation
for Administrative and General Expense to the
College of Arts and Sciences)

$\frac{\$2,515,957}{458,615} = \5.49 per earned quarter hour of credit

Table 2 shows the allocated expenditure for the College of Arts and Sciences and the College of Education and also the cost per earned quarter hour of credit for each of the eight major categories. Also shown in the total cost of instruction excluding research (item x) and total cost of instruction including research (item y).

The total cost of instruction for one hour of earned credit, in the College of Education, excluding research, was \$47.28 while the cost in the College of Arts and Sciences was \$29.85. The difference in the two costs can be accounted for in two major ways. About four times as many hours were earned in the College of Arts and Sciences as in the College of Education. The increases volume of earned credit hours reduces the per unit cost. Also the classes in the College of Education tend to be much smaller than in the College of Arts and Sciences. Thus more instructors, materials and space are required per hour of earned credit. In-service costs are not included.

TABLE 2

TOTAL EXPENDITURE AND COST PER EARNED QUARTER HOUR OF CREDIT FOR THE COLLEGE OF
EDUCATION AND THE COLLEGE OF ARTS AND SCIENCES FOR THE FISCAL YEAR 1967-68¹

Cost Category	Expenditure for College of Education	Expenditure for College of A&S	Cost/Qtr. Hr.Educ.	Cost/Qtr. Hr.A&S
(a) Administrative and General Expense	\$ 628,989	\$ 2,515,957	\$ 5.49	\$ 5.49
General Administration	(211,307)	(845,227)	(1.84)	(1.84)
Staff Benefits	(159,374)	(637,497)	(1.39)	(1.39)
General Institutional Expenses	(147,117)	(584,469)	(1.27)	(1.27)
Student Affairs	(112,191)	(448,764)	(0.98)	(0.98)
(b) Physical Plant	479,451	1,917,804	4.18	4.18
(c) Libraries	304,127	1,216,510	2.65	2.65
(d) Cost of Instruction (General)	3,096,376	7,992,790	27.00	17.43
(e) Cost of Instruction (Restricted)	911,963	47,544	7.95	0.10
x Total Cost of Instruction Excluding Research	5,420,906	13,690,605	47.28	29.85
(f) Research Administration	28,775	52,777	0.25	0.12
(g) Computer Center	159,436	747,027	1.39	1.63
(h) Research	1,558,242	6,007,025	13.59	13.10
y Tot. Cost of Inst. Incl. Res.	7,167,359	20,497,434	62.51	44.69

¹Cost per quarter hour was computed by dividing the total cost for each category by the total number of quarter hours earned in each college during the 1967-68 fiscal year. Total hours earned in College of Education = 114,662; total hours earned in College of Arts and Sciences = 485,615.

In order to compute the total cost for a student in the year under consideration, a typical program of study was used as a guide. (See Table 3). This typical program is a suggested guide; the student is allowed to vary the quarter in which he schedules a course. In general 100 and 200 numbered courses are taken during the Freshman and Sophomore years while 300, 400 and 500 level courses are scheduled the last two years of study. Courses numbered 600 and higher are reserved for graduate students.

Table 4 summarizes the number of quarter hours typically scheduled in the College of Arts and Sciences and the College of Education by a student following the suggested program shown in Table 3. A student will take 11 hours of credit in the College of Education and 85 hours in the College of Arts and Sciences during his first two years. During his last two years he will take a total of 63 hours in the College of Education and 36 in the College of Arts and Sciences. It is assumed that electives are taken in the College of Arts and Sciences.

Table 5 summarizes the expenditures attributed to each cost category by college for a typical freshman and sophomore. Table 6 summarizes the cost for junior and seniors.

TABLE 3
SUGGESTED ELEMENTARY EDUCATION UNDERGRADUATE PROGRAM

FRESHMAN	SOPHOMORE	JUNIOR	SENIOR
First Quarter	Fourth Quarter	Seventh Quarter	Tenth Quarter
English 101 5* Speech 108 5 Int. To Educ. 5* Phy. Educ. 1* <u>16</u>	English 121 5 History 251 5 Phys. Sci. 5 Phy. Educ. 1* <u>16</u>	Music 303 3 Fine Arts 300 5 Math. 502 5 Educ. Psy. 304 5* <u>18</u>	English Educ. 300 3* Elem. Educ. 345 2* Reading 402 5* Elective 5 <u>15</u>
Second Quarter	Fifth Quarter	Eighth Quarter	Eleventh Quarter
English 102 5 Math. 100 5 Pol. Science 5 Phy. Educ. 1* <u>16</u>	English 122 5 History 252 5 Bio. Sciences 5 Phy. Educ. 1* <u>16</u>	Music 304 3 Educ. Psy. 201 3* Art 305 5 Elective 5 <u>16</u>	Elem. Curr. 334 5* Math. Educ. 337 3* Eng. Educ. 338 3* Science Educ. 339 3* Soc. Sci. Ed. 340 3* <u>17</u>
Third Quarter	Sixth Quarter	Ninth Quarter	Twelfth Quarter
Soc. Sci. 5 Geography 101 5 Phy. Science 5 Phy. Educ. 1* <u>16</u>	Soc. Sci. 5 Bio. Sci. 5 Elective 5 Phy. Educ. 1* <u>16</u>	Reading 401 5* Phy. Educ. 307 5* Health Ed. 344 3* Elective 5 <u>18</u>	Elem. Educ. 346 5* Elem. Educ. 347 5* Elem. Educ. 348 5* <u>15</u>

Total Number of Hours = 195

* Denotes Education Course

TABLE 4
 QUARTER HOURS TAKEN IN COLLEGE OF EDUCATION
 AND COLLEGE OF ARTS AND SCIENCES FOLLOWING
 SUGGESTED ELEMENTARY EDUCATION UNDERGRADUATE
 PROGRAM

12.

Quarter	Education	Arts & Sciences	Total
Freshman Year	8	40	48
First	(6)	(15)	(16)
Second	(1)	(15)	(16)
Third	(1)	(15)	(16)
Sophomore Year	3	45	48
Fourth	(1)	(15)	(16)
Fifth	(1)	(15)	(16)
Sixth	(1)	(15)	(16)
Junior Year	21	31	52
Seventh	(5)	(13)	(18)
Eighth	(3)	(13)	(16)
Ninth	(13)	(5)	(18)
Senior Year	42	5	47
Tenth	(10)	(5)	(15)
Eleventh	(17)	(0)	(17)
Twelfth	(15)	(0)	(15)
Total	74	121	195

TABLE 5

**COST TO EDUCATE A STUDENT IN THE LOWER DIVISION DURING THE 1967-68 FISCAL YEAR
ASSUMING THE SUGGESTED ELEMENTARY TEACHER EDUCATION PROGRAM¹**

Cost Category	Freshman		Sophomore	
	Educ.	A&S	Educ.	A&S
(a) Administrative and General Expense	\$ 43.92	\$ 219.60	\$ 21.96	\$ 247.05
General Administration	(14.72)	(73.60)	(7.36)	(82.80)
Staff Benefits	(11.12)	(55.60)	(5.56)	(62.55)
General Institutional Expenses	(10.16)	(50.80)	(5.08)	(57.15)
Student Affairs	(7.84)	(39.20)	(3.92)	(44.10)
(b) Physical Plant	33.44	167.20	16.72	188.10
(c) Libraries	21.20	106.00	10.60	119.25
(d) Cost of Instruction (General)	216.00	697.20	108.00	784.35
(e) Cost of Instruction (Restricted)	63.60	4.00	31.80	4.50
x Total Cost of Instruction Excluding Research	378.00	1,194.00	189.00	1,343.00
(f) Research Administration	2.00	4.80	1.00	5.40
(g) Computer Center	11.12	65.20	5.56	73.35
(h) Research	108.72	524.00	40.77	589.50
y Total Cost of Instruction Including Research	500.00	1,788.00	236.00	2,011.00

¹See Tables 3 and 4 for suggested elementary education undergraduate program.

TABLE 6

COST TO EDUCATE A STUDENT IN THE UPPER DIVISION DURING THE 1967-68 FISCAL YEAR
ASSUMING THE SUGGESTED ELEMENTARY TEACHER EDUCATION PROGRAM¹

Cost Category	Junior		Senior	
	Educ.	A&S	Educ.	A&S
(a) Administrative and General Expense	170.19	115.29	225.09	27.45
General Administration	(38.64)	(57.04)	(75.44)	(9.20)
Staff Benefits	(29.19)	(43.09)	(56.99)	(6.95)
General Institutional Expenses	(26.67)	(39.37)	(52.07)	(6.35)
Student Affairs	(20.58)	(30.38)	(40.18)	(4.90)
(b) Physical Plant	87.87	129.58	20.90	171.38
(c) Libraries	55.65	82.15	108.65	13.25
(d) Cost of Instruction (General)	567.00	540.33	1,107.00	87.15
(e) Cost of Instruction (Restricted)	66.95	3.10	325.95	0.50
x Total Cost of Instruction Excluding Research	948.00	870.00	1,787.00	299.00
(f) Research Administration	5.25	3.72	0.60	10.25
(g) Computer Center	29.19	50.53	56.99	8.15
(h) Research	421.29	406.10	557.19	65.50
y Total Cost of Instruction Including Research	1,404.00	1,330.00	2,402.00	383.00

¹See Tables 3 and 4 for suggested elementary education undergraduate program.

Table 7 presents a summary of the total cost for each academic level by cost category. The total cost of instruction, (item A) exclusive of research, ranges from \$1,532 for a sophomore to \$2,087 for a senior elementary education major.

For comparison purposes Table 8 shows the instructional cost (cost category 4, Cost of Instruction (General) in the College of Education for the years 1960-61 through 1967-68. The large increase in expenditures (over 52%) during the 1967-68 fiscal year over the expenditures of 1966-67 is due to a substantial increase in the overall budget of the University. The overall income of the University of Georgia increased from \$27,291,911 for the 1966-67 fiscal year to \$42,229,096 for the 1967-68 fiscal year. This is an increase in income of over 55%. The overall income of the University increased to \$48,781,942 in 1968-69, an increase of about 15% over the 1967-68 fiscal year. It is anticipated that there will be a gradual increase in the income of the University in the next several years.

TABLE 7
TOTAL EXPENSE TO EDUCATE A STUDENT BY COST CATEGORY AND CLASS

Cost Category	Freshman	Sophomore	Junior	Senior
(a) Administrative and General Expense	263.52	269.46	285.48	252.54
General Administration	(88.32)	(90.16)	(95.68)	(84.64)
Staff Benefits	(66.72)	(68.11)	(72.28)	(63.94)
General Institutional Expenses	(60.96)	(62.23)	(66.04)	(58.42)
Student Affairs	(47.04)	(48.02)	(50.96)	(45.08)
(b) Physical Plant	200.64	204.82	217.45	192.28
(c) Libraries	127.20	129.85	137.80	121.90
(d) Cost of Instruction (General)	913.20	892.35	1,107.33	1,194.15
(e) Cost of Instruction (Restricted)	67.60	36.30	70.05	326.45
x Total Cost of Instruction Excluding Research	1,572.00	1,532.00	1,818.00	2,087.00
(f) Research Administration	6.80	6.40	8.97	10.85
(g) Computer Center	76.32	78.91	79.72	65.14
(h) Research	632.72	630.27	827.39	622.69
y Total Cost of Instruction Including Research	2,288.00	2,246.00	2,734.00	2,786.00

TABLE 8

TOTAL INSTRUCTIONAL COSTS, TOTAL EARNED QUARTER HOURS AND COST PER
EARNED QUARTER HOUR OF CREDIT IN THE COLLEGE OF EDUCATION
FOR SELECTED YEARS¹

Year	Instructional Costs	Total Quarter Hours Earned	Cost Per Earned Quarter Hour of Credit
1960-61	\$ 507,589	37,527	\$13.43
1961-62	626,761	42,903	14.60
1962-63	762,212	47,413	16.11
1963-64	970,519	68,127	14.25
1964-65	1,155,660	74,999	15.41
1965-66	1,382,758	84,600	16.34
1966-67	1,816,415	102,735	17.68
1967-68 ²	3,096,376	114,662	27.00

¹Taken from: Annual Report of the College of Education. College of Education, Education, University of Georgia, Athens, Ga. (for respective years involved).

²Computed in present study.

Summary

This bulletin has presented a brief summary of cost data for the education of elementary education students at the University of Georgia for the fiscal year 1967-68. The cost of instruction without consideration to such cost as libraries, administration and physical plant per earned quarter hour of credit in the College of Education was \$27.00 while the cost in the College of Arts and Sciences was \$17.43. The cost of instruction (general) plus costs for such services as libraries, administration and physical plant but excluding research, per earned quarter hour of credit in the College of Education was \$47.28 while the cost in the College of Arts and Sciences was \$29.85.

Table 9 presents a summary of the cost on instruction (general) and the total cost of instruction excluding research for a typical student in each class.

TABLE 9
SUMMARY OF COSTS FOR 1967-68 FOR A TYPICAL STUDENT

Cost Category	Freshman	Sophomore	Junior	Senior
Cost of Instruction (General)	\$ 913	\$ 892	\$1,107	\$1,194
Total Cost of Instruction Excluding Research	1,572	1,532	1,818	2,087

There were an average of 200 undergraduate elementary education students enrolled in each of the freshman and sophomore classes and about 300 each in the junior and senior classes in 1967-68 (Annual Report, 1968). Therefore, the cost of instruction (general) for all students was about \$1,051,000 and the total cost of instruction excluding research was about \$1,792,000.

If it is assumed that the cost per quarter of earned credit remains constant through 1975-76 and that the student body of the College of Education continues to grow to an average enrollment of 240 for the freshman class, 300 for the sophomore class and 420 for each of the junior and senior classes (Ayers, 1969), then the cost of instruction (general) in 1975-76 will be \$1,455,000 and the total cost of instruction excluding research will be \$2,480,000.

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